



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AF/IFW

In the application of )  
)

PETER HO KA NAM )  
)


Serial No.: 10/644,181 )  
)

Filed: 08/20/2003 )  
)

For: MECHANICAL SWEEPER )  
CONFIGURATION )

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Martha L. Hastings, Sec'y to Shannon V. McCue, Reg. No. 42,859

**TRANSMITTAL SHEET**

Enclosed are the following documents:

Appeal Brief (*with Certificate of Mailing*)

Claims Appendix (4 pages)

Evidence Appendix (1 page)

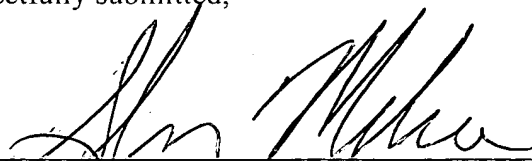
Related Appeals and Interferences Appendix (1 page)

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Respectfully submitted,



Shannon V. McCue, Reg. No. 42,859

Renner, Kenner, Greive, Bobak, Taylor & Weber

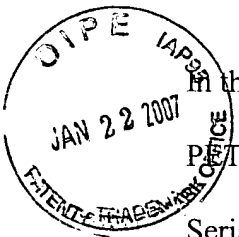
First National Tower - Fourth Floor

Akron, Ohio 44308-1456

Telephone: (330) 376-1242

Facsimile: (330) 376-9646

Attorney for Applicant



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*Martha L. Hastings*  
Martha L. Hastings, Secretary to Shannon V. McCue

Mail Stop Appeal Brief – Patents  
Commissioner for Patents  
Alexandria, VA 22313-1450

**APPEAL BRIEF**

Sir:

This is an Appeal to the Board of Patent Appeals from the final decision dated September 15, 2006, of the primary Examiner finally rejecting claims 1-23. A Notice of Appeal was filed November 22, 2006.

**I. Real Party in Interest**

The above-identified application was filed on August 20, 2003, and assigned Serial No. 10/644,181, naming Peter Ho Ka Nam as inventor. His rights were assigned to The Hoover Company. The Assignment was recorded by the United States Patent and Trademark Office at Reel/Frame 015106/0241.

**II. Related Appeals and Interferences**

None.

**III. Status of Claims**

The application was originally filed with 20 claims. In the first Office Action, the Examiner rejected claims 1-20. The Applicant responded to this Office Action with an argument and presented

new claims 21-23 for consideration. In a second Office Action, the Examiner rejected claims 1-23 and made the action Final.

#### **IV. Status of the Amendments**

All amendments to the claims have been entered. New claims 21-23 presented with the Applicant's first response have been entered

#### **V. Summary of the Claimed Subject Matter**

1. A mechanical sweeper 10, comprising:
  - a front housing (20);
  - a rotating brush (14, 16) secured to the front housing (20) having tangentially extending bristles adapted to engage a surface at an oblique angle (P. 4, L. 3-15, Figs. 1 and 2);
  - a frame 24 secured to a lower portion of the front housing 20 (P. 5, L. 10-11, Fig. 1);
  - a height adjustment column 40 rising from the rear of the frame 24 (P. 5, L. 13-18, Fig. 2); and
  - a dirt receptacle 30 removably positional on an upper surface of the frame 24, wherein:
    - the front housing 20 and column 40 serve to orient the dirt receptacle 30 in a position relative to the frame 24 (P. 5, L. 17-29, Fig. 2).
11. A mechanical sweeper 10, comprising:
  - a front housing 20;
  - a first and a second rotating brush 14, 16 secured to the front housing 20 each having tangentially extending bristles adapted to engage a surface at an oblique angle (P. 4, L. 3-15, Figs. 1 and 2);
  - a dirt scoop 21 positioned in the upper housing 20 proximate to the point at which the bristles of the first brush 14 contact the bristles of the second brush 16 (P. 4, L. 15-

19, Fig. 3);

a frame 24 secured to a lower portion of the front housing 20 (P. 5, L. 10-11, Fig. 1);

a column 40 rising from the rear of the frame 24 (P. 5, L. 13-18, Fig. 2); and

a dirt receptacle 30 removably positional on an upper surface of the frame 24 and adapted to receive dirt from the dirt scoop 21 when placed in an operational position, wherein:

the front housing 20 and column 40 serve to orient the dirt receptacle 30 in the operational position (P. 5, L. 17-29, Fig. 2).

21. A mechanical sweeper 10 comprising:

a front housing 20;

a rotating brush 14, 16 secured to the front housing 20 (P. 4, L. 3-15, Figs. 1 and 2);

a frame 24 secured to a lower portion of the front housing 20 and extending rearwardly therefrom (P. 5, L. 10-11, Figs. 1 and 2);

a height adjustment column 40 rising from said frame 24 (P. 5, L. 13-18, Fig. 2);

a dirt receptacle 30 releasably attached to said frame 24 (P. 5, L. 17-29, Fig. 2);

and

an adjustable wheel assembly 50 at least partially receivable within said column 40 and movable vertically to adjust the height of said frame 24 (P. 6, L. 15-P. 7, L. 10, Fig. 4), wherein said adjustable wheel assembly 50 at least partially supports said frame 24 when said dirt receptacle 30 is removed (P. 6, L. 18-20, Figs. 3 and 4).

## **VI. Grounds of Rejection to be Reviewed on Appeal**

**A. The Examiner rejected claims 1-7 under 35 U.S.C. § 102(b) as being anticipated by Gomez, U.S. Patent No. 2,670,485.**

The Examiner argues that Gomez teaches a sweeper comprising a front housing (60) and a

rotating brush (24) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle. The Examiner further argues that there is a frame (40) secured to a lower portion of the housing. Also, the Examiner argues that there is a height adjustment column (66) rising from the rear of the frame, and a dirt receptacle (30) removably located on the frame.

With respect to claim 2, the Examiner argues that the dirt receptacle defines a notch (64) that extends around the column.

With respect to claim 3, the Examiner argues that there is an adjustable wheel assembly (68) positioned within the column.

With respect to claim 4, the Examiner argues that there is a rotary knob located on top of the column between reference numbers 62 and 66 in Fig. 2.

With respect to claim 5, the Examiner argues that the threading on 66 forms a cam which moves the wheel up and down relative to the frame as the knob is rotated.

With respect to claims 6 and 7, the Examiner argues that when the wheel is moved downwardly, the force of the brush is increased, and when the wheel is moved upwardly, the force of the brush is decreased.

**B. The Examiner has rejected claims 1 and 3-9 under 35 U.S.C. § 102(b) as anticipated by Parker, et al., U.S. Patent No. 2,268,059.**

The Examiner argues that Parker teaches a sweeper comprising a front housing (12) and a rotating brush (17) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle. The Examiner further argues that there is a frame (28) secured to a lower portion of the housing and a height adjustment column (51a) rising from the rear of the frame. Finally, the Examiner argues that there is a dirt receptacle (14) removably located on the frame.

With respect to claim 3, the Examiner argues that there is an adjustable wheel assembly (51) positioned within the column.

With respect to claim 4, the Examiner argues that there is a rotary knob located at the top of the column, shown in Figure 3.

With respect to claim 5, the Examiner argues that the threading on 51a is a cam for moving the wheel up and down relative to the frame as the knob is rotated.

With respect to claims 6 and 7, the Examiner argues that when the wheel is moved downward, the force of the brush is increased, and when the wheel is moved upward, the force of the brush is decreased.

With respect to claim 8, the Examiner argues that there is a latch (34, 33) on the upper portion of the dirt receptacle.

With respect to claim 9, the Examiner argues that the latch, column, and frame cooperate to position the dirt receptacle relative to the front housing.

**C. The Examiner has rejected claims 1, 3-9 and 21-23 under 35 U.S.C. § 102(b) as anticipated by Patzold, et al., U.S. Patent No. 4,502,173.**

With respect to claim 1, the Examiner argues that Patzold teaches a sweeper comprising a front housing (11) and a rotating brush (14) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle. The Examiner further argues that there is a frame seen in Figures 4 and 5 shown by the cross-hatched area below the front housing, where the frame is secured to a lower portion of the housing. Also, the Examiner argues that there is a height adjustment column (57) rising from the rear of the frame. Finally, the Examiner argues that there is a dirt receptacle (68) removably located on the frame.

With respect to claim 4, the Examiner argues that there is a rotary knob on the top of column (66).

With respect to claim 5, the Examiner argues that there is a cam (53) that moves the wheel up and down relative to the frame as the knob is rotated.

With respect to claims 6 and 7, the Examiner argues that when the wheel is moved downwardly, the force of the brush is increased, and when the wheel is moved upwardly, the force of the brush is decreased.

With respect to claim 8, the Examiner argues that there is a latch on the upper portion of the dirt receptacle shown in Figure 3 of Patzold.

With respect to claim 9, the Examiner argues that the latch, column, and frame cooperate to position the dirt receptacle to the front housing.

With respect to claim 21, the Examiner argues that the sweeper comprises a front housing 11 and a rotating brush 14 secured to the housing. The Examiner further argues that the frame, as shown in Figs. 4 and 5, secured to a lower portion of the housing and extending rearward from a central portion of the sweeper. Also, the Examiner argues that there is a height adjustment column (57) rising from the rear of the frame and a dirt receptacle (68) removably located on the frame. Finally, the Examiner argues that there is an adjustable wheel (17) received within the column and movable vertically to adjust the height of the frame where the wheel partially supports the frame when the dirt receptacle is removed.

With respect to claim 22, the Examiner argues that the frame defines a wheel well because there is an internal cavity between the frame and the front housing for at least partially receiving the wheel in the adjustable wheel assembly. The Examiner reasons that the column attaches to the frame over the wheel well because the column is located within the cavity between the frame and the front housing.

With respect to claim 23, the Examiner argues that the dirt receptacle defines a notch for partially receiving the column, and the column is engageable with the notch to orient the dirt receptacle relative to the frame. The Examiner explains that the dirt receptacle is notched downward (68) to receive a portion (52) of the column.

**D. The Examiner has rejected claims 1 and 8-10 under 35 U.S.C. § 102(b) as being anticipated by Patzold, U.S. Patent No. 4,484,371, as evidenced by Patzold, U.S. Patent No. 4,502,173.**

The Examiner argues that Patzold teaches a sweeper comprising a front housing (11) and a rotating brush (14) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle, and a frame (Fig. 5) secured to a lower portion of the housing. The Examiner further argues that there is a height adjustment column (Fig. 1, not labeled but evidenced by Patent No. 4,502,173) rising from the rear of the frame. Finally, the Examiner argues that there is a dirt receptacle (27) removably located on the frame.

With respect to claim 8, the Examiner argues that there is a latch (35) on the upper portion of the dirt receptacle.

With respect to claim 9, the Examiner argues that the latch, column, and frame cooperate to position the dirt receptacle to the front housing.

With respect to claim 10, the Examiner argues that the latch moves in a linear path to engage a catch in the housing (40).

**E. The Examiner has rejected claim 11 under 35 U.S.C. § 102(b) as being anticipated by Haaga, U.S. Patent No. 5,896,611.**

The Examiner argues that Haaga teaches a sweeper comprising a front housing (forward portion of 10) and a first and second rotating brush (15, 16) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle, and a dirt scoop (20) positioned between the brushes. The Examiner further argues that there is a frame (Figure 1) secured to a lower portion of the housing having a column (30) rising from the rear of the frame. Finally, the Examiner argues that there is a dirt receptacle (not labeled but shown as 10 on Figure 1) removably located on the frame.

**F. The Examiner has rejected claims 11-12 and 18-20 under 35 U.S.C. § 102(b) as being anticipated by Haaga, U.S. Patent No. 5,184,367.**

With respect to claim 11, the Examiner argues that Haaga teaches a sweeper comprising a front housing (1) and a first and second rotating brush (3) secured to the housing having tangentially extending bristles adapted to engage a surface at an oblique angle. The Examiner further argues that there is a dirt scoop (column 3, lines 20-28) positioned between the brushes, and a frame (best shown near 18) secured to a lower portion of the housing having a column (21) rising from the rear of the frame. Finally, the Examiner argues that there is a dirt receptacle (2) removably located on the frame.

With respect to claim 12, the Examiner argues that the dirt receptacle defines a notch for extending around the column (17).



With respect to claim 18, the Examiner argues that there is a latch positioned on the upper portion of the dirt receptacle (17).

With respect to claim 19, the Examiner argues that the latch, column, and frame cooperate to position the dirt receptacle to the front housing.

With respect to claim 20, the Examiner argues that the latch moves in a linear path to engage a catch located above the scoop (2).

**G. The Examiner rejected claims 11 and 13-17 under 35 U.S.C. § 103(a) as being unpatentable over Haaga, U.S. Patent No. 5,184,367, in view of Parker, et al., U.S. Patent No. 2,268,059.**

The Examiner argues that Haaga teaches all of the essential elements of the claimed invention but fails to teach a column width and adjustable wheel assembly. The Examiner argues that Parker teaches a height adjustment column (51a) rising from the rear of the frame, where the adjustable wheel assembly (51) is positioned within the column. With respect to claims 13-17, the Examiner argues that Parker shows a rotary knob located on top of the column and a cam for moving the wheel up and down relative to the frame as the knob is rotated, where movement of the wheel downward increases the force on the first and second brushes, while upward movement decreases the force on the first and second brushes. The Examiner argues that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Haaga's sweeper with the adjustable wheel of Parker since the adjustable wheel aids in adjusting the amount of pressure applied to the ground or floor by the brush (page 2, column 2, lines 6-15).

**VII. Argument**

**A. The Examiner's rejection of claims 1-7 under 35 U.S.C. § 102(b) as being anticipated by Gomez, U.S. Patent No. 2,670,485, is improper.**

The Examiner has rejected claims 1-7 as anticipated by Gomez, U.S. Patent No. 2,670,485. The Applicant respectfully disagrees because Gomez does not teach all of the limitations of these claims. In particular, with respect to claim 1, the Examiner argues that there is a frame 40 secured to the lower portion of Gomez's housing and a height adjustment column rising from the rear of the

frame 40. The Applicant notes that the frame 40, in Gomez, does not have a column rising from it. In contrast, the column is attached to the rear of the dirt receptacle 30, which is slidably mounted on the frame 40.

Also, with respect to the orientation of the rotating brush, the Applicant respectfully disagrees with the Examiner's argument that Gomez has bristles that are adapted to engage the surface at an oblique angle. It is clear from the figures that the bristles in Gomez are adapted to contact the surface at a perpendicular angle to the surface.

While dependent claims 2-7 are believed to be patentably distinct from Gomez based on their dependency from claim 1, these claims also have independent bases for allowability. For example, claim 2 requires a notch defined in the rear of the dirt receptacle adapted to partially extend around the column. Gomez does not have such a notch. The screw 66, which the Examiner argues is a column, is mounted outside the dirt receptacle on a mounting bracket that extends rearwardly therefrom.

With respect to claim 3, Gomez does not disclose a wheel assembly that is positioned within the column. To the extent that the Examiner has argued that screw 66 is a column, it is clear that the wheel is mounted at one end of the screw by a caster assembly and is not located within the screw 66.

**B. The Examiner's rejection of claims 1 and 3-9 under 35 U.S.C. § 102(b) as being anticipated by Parker, et al., U.S. Patent No. 2,268,059, is improper.**

The Examiner has rejected claims 1 and 3-9 as anticipated by Parker, U.S. Patent No. 2,268,059. Parker, like Gomez, includes a brush mounted on a horizontally extending bar such that the brush is adapted to contact the surface at a perpendicular angle. Therefore, the Applicant respectfully disagrees with the argument that the bristles are adapted to engage the surface at an oblique angle. Also, like Gomez, Parker does not teach a column rising from the rear of the frame but employs a caster that extends downward from a bracket attached to the rear of the housing. Consequently, the Applicant believes that claim 1 is not anticipated by Parker.

Dependent claims 3-9 are believed to be patentably distinct based on their dependency from claim 1 and for the reasons explained with respect to Gomez. Parker's caster, which the Examiner

argues is a column and adjustable wheel assembly like the caster in Gomez, does not teach the limitations found in claims 3 and 5, as discussed above. Moreover, with respect to claims 8 and 9, the Applicant respectfully disagrees that Parker discloses a latch, as claimed. The Examiner has argued that items 33 and 34 are a latch and that the latch, column, and frame cooperate to position the dirt receptacle on the front of the housing. Items 33 are flanges that simply rest on top of a top wall 10, and item 34 is a handle that provides a surface that the user can grip. None of these items would be considered a latch by one of ordinary skill. Moreover, these items do not interact in any way with the caster, which the Examiner has referred to as a column, to orient the dirt receptacle relative to the housing. Consequently, the Applicant believes that claims 1 and 3-9 are not anticipated by Parker and respectfully requests reconsideration of this rejection.

**C. The Examiner's rejection of claims 1, 3-9, and 21-23 under 35 U.S.C. § 102(b) as being anticipated by Patzold, U.S. Patent No. 4,502,173, is improper.**

With respect to claim 1, the Examiner argues that Patzold '173 teaches a frame secured to a lower portion of the front housing, where the frame has a height adjustment column rising from the rear of the frame. The Applicant respectfully disagrees because Patzold '173 does not have a height adjustment column rising from the rear of the frame as claimed. The Examiner argues that item 57 is a height adjustment column rising from the rear of frame. As a first matter, the Applicant respectfully disagrees because it does not rise from the rear of the frame but is located in the front of the sweeper and extends downwardly from a cover. More importantly, however, item 57 does not serve to orient a dirt receptacle as claimed. Although not explicitly described in Patzold '173, it appears that Patzold does not include a removable dirt receptacle as in the claimed invention but instead has a cover at the rear of the housing that may be removed to empty any dirt received within the housing 11. As best seen in Fig. 1, a handle is provided on the cover for this purpose. The cover does not interact with item 57 and, therefore, is not oriented by it. Consequently, the Applicant believes that the invention of claims 1, 3-9, and 21-23 is not anticipated since all of these claims require a column rising from the frame.

Separately, with respect to claim 21, this claim also requires that the column at least partially receive the adjustable wheel assembly and that the wheel assembly partially support the frame when

the dirt receptacle is removed. It is clear that Patzold does not disclose a column that partially receives the wheel assembly. Item 57, which the Examiner refers to as a column, does not partially receive any wheels. In Patzold '173, the wheel assemblies are separately attached to the sides of the housing 11. Therefore, the Applicant respectfully requests reconsideration of the rejection of claims 1, 3-9, and 21-23.

**D. The Examiner's rejection of claims 1 and 8-10 under 35 U.S.C. § 102(b) as being anticipated by Patzold, U.S. Patent No. 4,484,371, as evidenced by Patzold, U.S. Patent No. 4,502,173, is improper.**

The Examiner has argued that claims 1 and 8-10 are anticipated by Patzold, U.S. Patent No. 4,484,371. The Applicant respectfully disagrees because Patzold '371 does not teach each element of the claims. In particular, Patzold does not disclose a column, as claimed. The Examiner points to the round element in Fig. 1, which is not described or shown in the figures. The Examiner refers to another patent, U.S. Patent 4,502,173, in effect admitting that all of the required teachings are not found in the '371 patent. Consequently, the Applicant respectfully requests reconsideration of the rejection of claims 1 and 8-10.

**E. The Examiner's rejection of claim 11 under 35 U.S.C. § 102(b) as being anticipated by Haaga, U.S. Patent No. 5,896,611, is improper.**

The Examiner rejected claim 11 as anticipated by Haaga, U.S. Patent No. 5,896,611. The Applicant respectfully disagrees because Haaga '611 does not disclose a column, as claimed. In particular, the Examiner has argued that item 30 is a column, but this refers to the pushing arm (col. 5, lines 15-17). Moreover, Haaga does not disclose a separate frame to which the housing is attached. As a result, the requirement that the column rise upwardly from the frame is also not disclosed in the '611 patent. Instead, the '611 patent teaches attachment of the push bar 30 to the housing 10. Similarly, the '611 patent does not teach the requirement that the frame be secured to a lower portion of the housing. Consequently, the Applicant respectfully requests reconsideration of this rejection.

**F. The Examiner's rejection of claims 11-12 and 18-20 under 35 U.S.C. § 102(b) as being anticipated by Haaga, U.S. Patent No. 5,184,367, is improper.**

The Examiner has rejected claims 11-12 and 18-20 as anticipated by Haaga, U.S. Patent No. 5,184,367. The Applicant respectfully disagrees because Haaga does not teach a column, as claimed.

The Examiner has argued that item 21 is a column, but review of the specification clarifies that this refers to the vertex of a hook-shaped profiling 18. Moreover, the profiling 18 does not rise from the rear of the frame, as claimed. As best shown in Fig. 1, the profiling 18, which acts as a locating lip that allows the rear portion of Haaga's housing to be tilted away from the front portion, is located centrally. Also, Haaga does not disclose a frame but instead describes a two-piece housing. Consequently, the limitation that the column rise from the frame and that the frame be secured to the front housing are not disclosed by Haaga. Consequently, the Applicant requests reconsideration of this rejection. Also, Haaga does not disclose a dirt scoop positioned in the upper housing proximate to the point at which the bristles of the first brush contact the bristles of the second brush. In light of the foregoing, the Applicant believes that claims 11-12 and 18-20 are in condition for allowance and respectfully requests notice of the same.

With respect to the dependent claims, the Applicant notes that while these claims are believed to be in condition for allowance based on their dependency from claim 11, these claims are believed to contain independent bases of allowability as well. For example, since Haaga lacks a column, it cannot teach a notched defined in the rear of the dirt receptacle adapted to partially extend around the column. In considering Haaga, no notch is formed in the rear of the dirt receptacle 2.

**G. The Examiner's rejection of claims 11 and 13-17 under 35 U.S.C. § 103(a) as being unpatentable over Haaga, U.S. Patent No. 5,184,367, in view of Parker, U.S. Patent No. 2,268,059, is improper.**

The Examiner has rejected claims 11 and 13-17 as obvious over Haaga '376 in view of Parker. The Applicant respectfully disagrees because even if one of ordinary skill were motivated to combine these patents, they would not arrive at the claimed invention. In particular, as discussed at length above, Parker does not disclose a column as claimed. In particular, Parker does not disclose a column rising upward from the rear of a frame but instead employs a caster mounted on a bracket

attached to the sweeper housing. As described in the Applicant's specification on page 2, second paragraph, attachment of the wheel to the rear of the housing is disadvantageous in that removal of the dirt receptacle would prevent movement of the remainder of the sweeper. Such would be the case if one were to combine Parker and Haaga as suggested by the Examiner. Moreover, Parker's caster, which the Examiner describes as being a column, is not capable of working to orient the dirt receptacle, as claimed.

Also, as discussed above, Haaga does not disclose a dirt scoop, as claimed in claim 11. Consequently, even if one of ordinary skill were to combine Haaga with Parker, which the Examiner has cited as providing a column with an adjustable wheel assembly, one of ordinary skill would not arrive at the claimed invention.

While the dependent claims are believed to be in condition for allowance based on their dependency from claim 11, these claims contain additional bases for allowability. For example, as discussed above, Parker does not disclose a wheel mounted within the column. Consequently, claim 13 and those that depend from it are not obvious over Haaga '376 in view of Parker. In light of the foregoing, the Applicant respectfully requests reconsideration of the rejection of claims 11 and 13-17.

#### **VIII. Claims Appendix**

Attached.

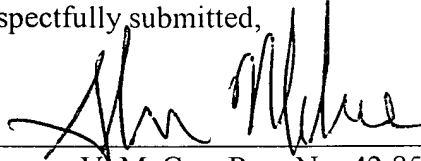
#### **IX. Evidence Appendix**

Attached.

**X. Related Appeals and Interferences Appendix**

Attached.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Shannon V. McCue', written over a horizontal line.

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Shannon V. McCue, Reg. No. 42,859  
Renner, Kenner, Greive, Bobak, Taylor & Weber  
First National Tower - Fourth Floor  
Akron, Ohio 44308-1456  
Telephone: (330) 376-1242  
Facsimile: (330) 376-9646  
Attorney for Applicant



## CLAIMS APPENDIX

1. (Original). A mechanical sweeper, comprising:
  - a front housing;
  - a rotating brush secured to the front housing having tangentially extending bristles adapted to engage a surface at an oblique angle;
  - a frame secured to a lower portion of the front housing;
  - a height adjustment column rising from the rear of the frame; and
  - a dirt receptacle removably positional on an upper surface of the frame,wherein:
  - the front housing and column serve to orient the dirt receptacle in a position relative to the frame.
2. (Original). The mechanical sweeper of claim 1, further comprising a notch defined in the rear of the dirt receptacle adapted to partially extend around the column.
3. (Original). The mechanical sweeper of claim 1, further comprising an adjustable wheel assembly positioned within the column.
4. (Original). The mechanical sweeper of claim 3, the adjustable wheel assembly further comprising a rotary knob on top of the column.
5. (Original). The mechanical sweeper of claim 4, further comprising a cam which moves the adjustment wheel up and down relative to the frame as the knob is rotated.
6. (Original). The mechanical sweeper of claim 3, wherein moving the adjustment wheel downwardly relative to the frame increases the force of the brush on the surface.



7. (Original). The mechanical sweeper of claim 3, wherein moving the adjustment wheel upwardly relative to the frame decreases the force of the brush on the surface.
8. (Original). The mechanical sweeper of claim 1, further comprising a latch positioned on the upper portion of the dirt receptacle.
9. (Original). The mechanical sweeper of claim 8, wherein the latch, column and frame cooperate to position the dirt receptacle relative to the front housing.
10. (Original). The mechanical sweeper of claim 8, wherein the latch moves in a linear path to engage a catch defined in the upper portion of the front housing.
11. (Previously Presented). A mechanical sweeper, comprising:
  - a front housing;
  - a first and a second rotating brush secured to the front housing each having tangentially extending bristles adapted to engage a surface at an oblique angle;
  - a dirt scoop positioned in the upper housing proximate to the point at which the bristles of the first brush contact the bristles of the second brush;
  - a frame secured to a lower portion of the front housing;
  - a column rising from the rear of the frame; and
  - a dirt receptacle removably positional on an upper surface of the frame and adapted to receive dirt from the dirt scoop when placed in an operational position, wherein:
    - the front housing and column serve to orient the dirt receptacle in the operational position.
12. (Original). The mechanical sweeper of claim 11, further comprising a notch defined in the rear of the dirt receptacle adapted to partially extend around the column.

13. (Original). The mechanical sweeper of claim 11, further comprising an adjustable wheel assembly positioned within the column.
14. (Original). The mechanical sweeper of claim 13, the adjustable wheel assembly further comprising a rotary knob on top of the column.
15. (Original). The mechanical sweeper of claim 14, further comprising a cam assembly which moves the adjustment wheel up and down relative to the frame as the knob is rotated.
16. (Original). The mechanical sweeper of claim 13, wherein:
  - moving the adjustment wheel downwardly relative to the frame increases the force of the first brush on the surface, and
  - moving the adjustment wheel downwardly relative to the frame increases the force of the second brush on the surface.
17. (Original). The mechanical sweeper of claim 13, wherein:
  - moving the adjustment wheel upwardly relative to the frame decreases the force of the first brush on the surface, and
  - moving the adjustment wheel upwardly relative to the frame decreases the force of the second brush on the surface.
18. (Original). The mechanical sweeper of claim 11, further comprising a latch positioned on the upper portion of the dirt receptacle.
19. (Original). The mechanical sweeper of claim 18, wherein the latch, column and frame cooperate to position the dirt receptacle relative to the scoop.

20. (Previously Presented). The mechanical sweeper of claim 18, wherein the latch moves in a linear path to engage a catch defined in the upper portion above the scoop.
21. (Previously Presented). A mechanical sweeper comprising:  
a front housing;  
a rotating brush secured to the front housing;  
a frame secured to a lower portion of the front housing and extending rearwardly therefrom;  
a height adjustment column rising from said frame;  
a dirt receptacle releasably attached to said frame; and  
an adjustable wheel assembly at least partially receivable within said column and movable vertically to adjust the height of said frame, wherein said adjustable wheel assembly at least partially supports said frame when said dirt receptacle is removed.
22. (Previously Presented). The mechanical sweeper of claim 21, wherein said frame defines a wheel well for at least partially receiving a wheel in said adjustable wheel assembly, wherein said column attaches to said frame over said wheel well.
23. (Previously Presented). The mechanical sweeper of claim 21, wherein said dirt receptacle defines a notch for at least partially receiving said column, wherein said column is engageable with said notch to orient said dirt receptacle relative to said frame.

## **Evidence Appendix**

None.

**Related Appeals and Interferences Appendix**

None.

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